

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of :
Peter LAPPE, et al. : Group: 1621
Serial No.: 10/804,727 :
Filed: 03/19/2004 : Examiner: Carr, Deborah D.
For: CARBOXYLIC....
METHYLNORBORANE :

Hedman and Costigan
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New York, NY 10036

DECLARATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Helmut Springer hereby deposes and says

That after graduating from a training course as a laboratory assistant, he received the degree of Chem.-Ing. (grad) from Essen University. As a result of a reorganization, his degree has been converted to Dipl.-Ing.

That in July 1974, he was employed by Ruhrchemie (now Celanese Chemicals Europe GmbH), the Assignee of the above identified application, as the leader of a research group in the area of development of organic chemicals, and has been active in active in the field from that time to the present.

That he is an inventor of the above application and that the following tests were seen under his direction to measure for the diesters claimed in the application. The pour point according to the ASTM method D-97-47 and the viscosity data was measured as kinematic viscosity in centistokes for comparison with the data presented in the Brannock patent cited by the Examiner.

TEST DATA

The viscosity and pour point data for the azelate and sebacate diesters of 2-hydroxymethylnorbnane (applicants' compounds) with the same diesters of 2-hydroxymethyl-2-methyl-norbornane (Brannock compounds). The results are in Table 1.

Table 1: Kinematic viscosity in Centistokes and Pour Point data of dicarbocyclic acids

Ester compound	Kinematic Viscosity in Centistokes/ $^{\circ}\text{C}$	Pour Point [$^{\circ}\text{C}$]
Bis-(2-hydroxymethyl-2-methylnorbornane) Azelate (Brannock)	106.6/37.8 $^{\circ}\text{C}$ 11.96/98.9 $^{\circ}\text{C}$	-40
Bis-(2-hydroxymethylnorbornane)azelate	61.1/40 $^{\circ}\text{C}$ 8.3/100 $^{\circ}\text{C}$	-48
Bis-(2-hydroxymethyl-2-methylnorbornane) Sebacate (Brannock)	106.5/37.8 $^{\circ}\text{C}$ 12.18/98.9 $^{\circ}\text{C}$	-40
Bis-(2-hydroxymethylnorbornane)sebacate	61.4/40 $^{\circ}\text{C}$ 8.5/100 $^{\circ}\text{C}$	\leq -48

CONCLUSION

The physical data given in Table 1 demonstrates, that the diester compounds of the instant application exhibits lower viscosity and Pour Point Data. Especially the low Pour Point data indicate an improved behaviour in low temperature applications. Accordingly, the diester compounds of the present application are particular suited for such lubricants, which have to meet a good low temperature performance.

Further, the low viscosity and Pour Point data of the ester compounds also mean an advantageous behaviour as plasticizer. A low viscosity means an easier work-up of the plasticizer into the thermoplastic polymer. Plasticizers with a low Pour Point lead to thermoplastic goods, which itself exhibit good cold flex properties and which are useful for low temperature applications.

The undersigned declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and imprisonment, or both, under Section 1001 of Title 18 of the U.S. Code and that such willful false statements may jeopardize the validity of the above-identified application or any patent issuing thereon.

16.6.2005

11.6.2005
Helmut Springer